Cisco 6130 NI-2 DSLAM System Cables

This chapter provides cabling guidelines, including

- NEBS Compliance Cabling Guidelines
- Required Cables for Installation with POTS Splitter
- Required Cables for Installation without POTS Splitter
- Required Cables for Subtended Network Configuration

Only qualified personnel should install, replace, or service this equipment.

For detailed port mapping tables, see Appendix B, “Port Mapping.” This appendix includes port mapping tables that can be used for building Cisco 6130 NI-2 DSLAM cables.

Table 3-1 lists Cisco cables required for Cisco 6130 NI-2 system configurations with and without a POTS splitter.

Table 3-1 Installation Cable Requirements for Cisco 6130 NI-2 DSLAM with and without a POTS Splitter

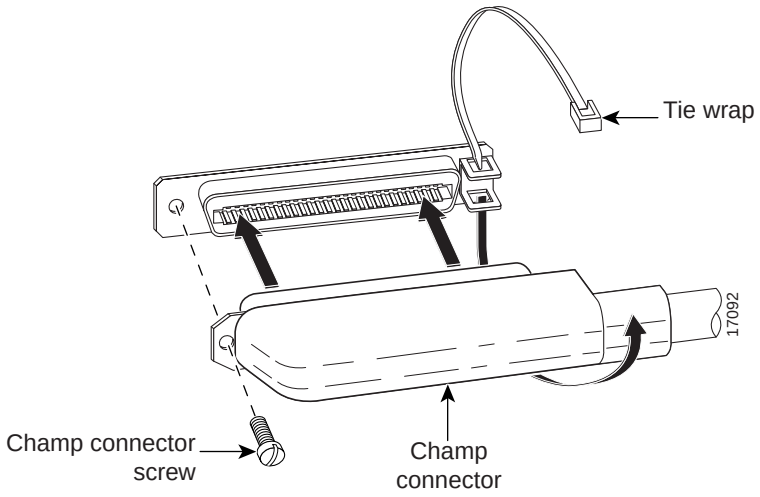
Configuration	Connection	Cable Type	Ports		Line Coding Technology	Reference	
			DSLAM	POTS Splitter		Table	Figure
Installation with a POTS splitter	Siecor POTS splitter to DSLAM	One-to-one[1]	128	128	DMT-2 (ADSL)	Table 3-2	Figure 3-2
Installation without a POTS splitter	DSLAM to main distribution frame (MDF)	Three-to-three[2]	128	None	DMT-2 (ADSL)	Table 3-3	Figure 3-3 and Figure 3-4

1 Six cables required.
2 Two cables required: 1 left and 1 right.

3.1 NEBS Compliance Cabling Guidelines

To comply with NEBS requirements, ensure that all cables are screw fastened onto backplane receptacles and that the cable Champ connectors are tie wrapped (Figure 3-1).

Figure 3-1 NEBS Cabling Compliance



3.2 Required Cables for Installation with POTS Splitter

During an installation with a POTS splitter, use only the Cisco cables specified in Table 3-1 to connect the Cisco 6130 NI-2 DSLAM, the POTS splitter, and the CO facility MDF. This section provides tables and illustrations for DSLAM-to-POTS splitter cable connections. Consult Siecor documentation for line connections from the MDF to the POTS splitter and POTS splitter cabling from the POTS splitter to the MDF.

Note Some Cisco 6130 NI-2 DSLAM receptacles in the cabling diagrams are not used because they are specific to one of the other Cisco 6100 DSLAM system configurations or because they are reserved for future use.

3.2.1 Making DSLAM-to-POTS Splitter Cable Connections

To connect the Cisco 6130 multiplexer chassis (MC) to the POTS splitter in installations with a POTS splitter, use one-to-one Cisco Champ cables. Use one-to-one cables to connect the POTS splitter xDSL outputs to the Cisco 6130 NI-2 multiplexer chassis ADSL inputs for DSLAM systems with quad-port DMT-2 ATUC-1-4DMT modules.

Table 3-2 lists the backplane connectors and part number for the Cisco one-to-one cable kit that permits you to connect the POTS splitter to the chassis (Cisco 6130 NI-2 DSLAM) backplane receptacles in installations with a POTS splitter.

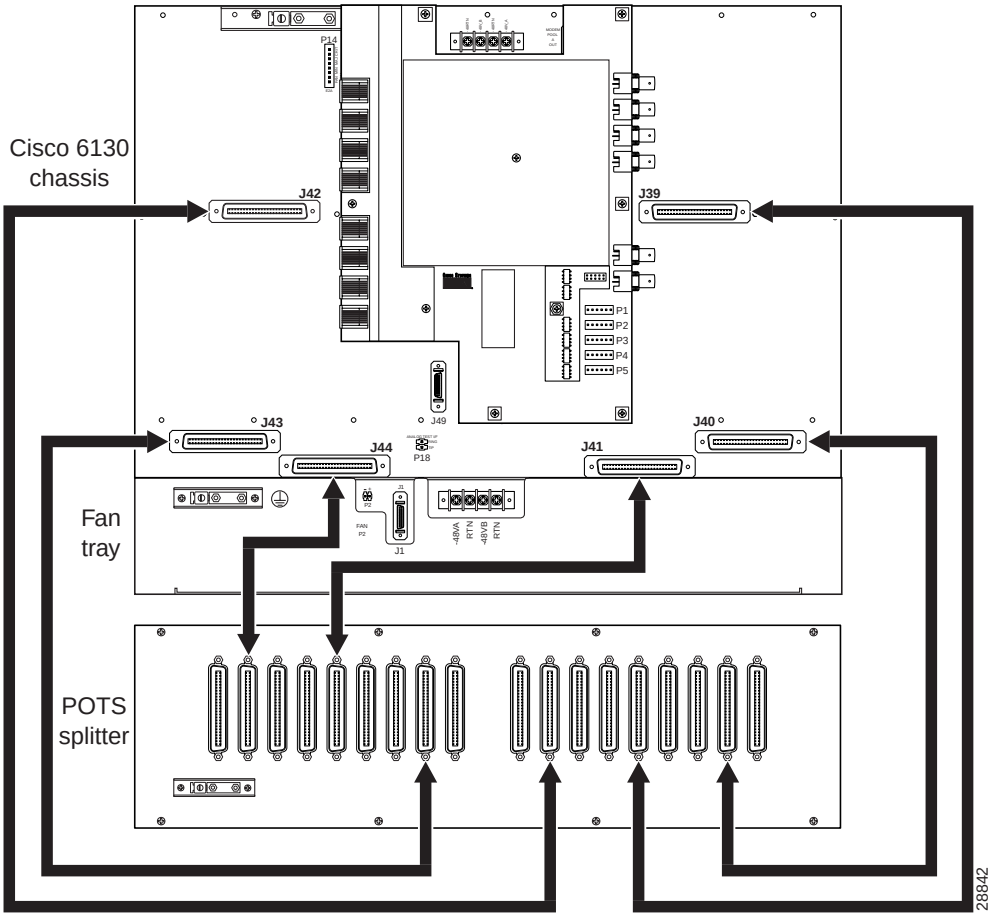
Table 3-2 1-to-1 Cable Connectors and Cable Part Number—DSLAM to POTS Splitter Connections

Connectors		Cisco Cable Part Number	
DSLAM	**POTS Splitter**	**Kit**	**Subassembly**
J39	xDSL 9-32	CAB-61-014	72-1665-01
J40	xDSL 1-8, 65-72		
J41	xDSL 73-96		
J42	xDSL 33-56		
J43	xDSL 57-64, 121-128		
J44	xDSL 97-120		

Note When you use one-to-one cables, see Table B-1 through Table B-7 for port mapping information.

Figure 3-2 shows one-to-one cabling between the chassis and the POTS splitter. Use the cables listed in Table 3-2 to make these connections.

Figure 3-2 DSLAM to POTS Splitter Chassis Cabling Diagram (1-to-1 Cables)



3.3 Required Cables for Installation without POTS Splitter

In an installation without a POTS splitter, use only designated cables to connect the Cisco 6130 NI-2 DSLAM and the CO facility MDF. The illustrations in this section show you how to connect three-to-three cables.

Note Some chassis connectors in the cabling diagrams are not used because they are specific to a different Cisco 6100 series NI-2 DSLAM system or because they are reserved for future use.

3.3.1 Using Three-to-Three Cables

To associate the CO facility MDF wire pairs and the DSLAM modem ports, the three-to-three cables remap wire pairs from the Cisco 6130 NI-2 DSLAM Champ connectors to the CO facility MDF Champ receptacles.

Use these cables in systems having quad-port ATUC-1-4DMT modules installed in the chassis. Table 3-3 lists the Cisco 6130 NI-2 DSLAM backplane receptacles and the cable kit part number for three-to-three Champ cable connectors between the DSLAM and the CO facility MDF in an installation without a POTS splitter.

Table 3-3 Cisco Connectors and Part Number for 3-to-3 Cable Kit—DSLAM to MDF Connections

Connector		Cisco Part Number	
DSLAM	**Main Distribution Frame**	**Kit**	**Subassembly**
J39, J40, J41	P4 (slots 1 to 6), P5 (slots 7, 8, and 21 to 24), or P6 (slots 25 to 28)	CAB-DSLAM 128-MDF	72-1765-01 (right cable)
J42, J43, J44	P1 (slots 13 to 18), P2 (slots 19, 20, and 31 to 34), or P3 (slots 35 to 38)		72-1720-01 (left cable)

Note When you use a three-to-three cable kit, see Table B-8 on page B-10 for port mapping information. Figure 3-3 shows the three-to-three cables.

Figure 3-3 Cisco 3-to-3 Cables

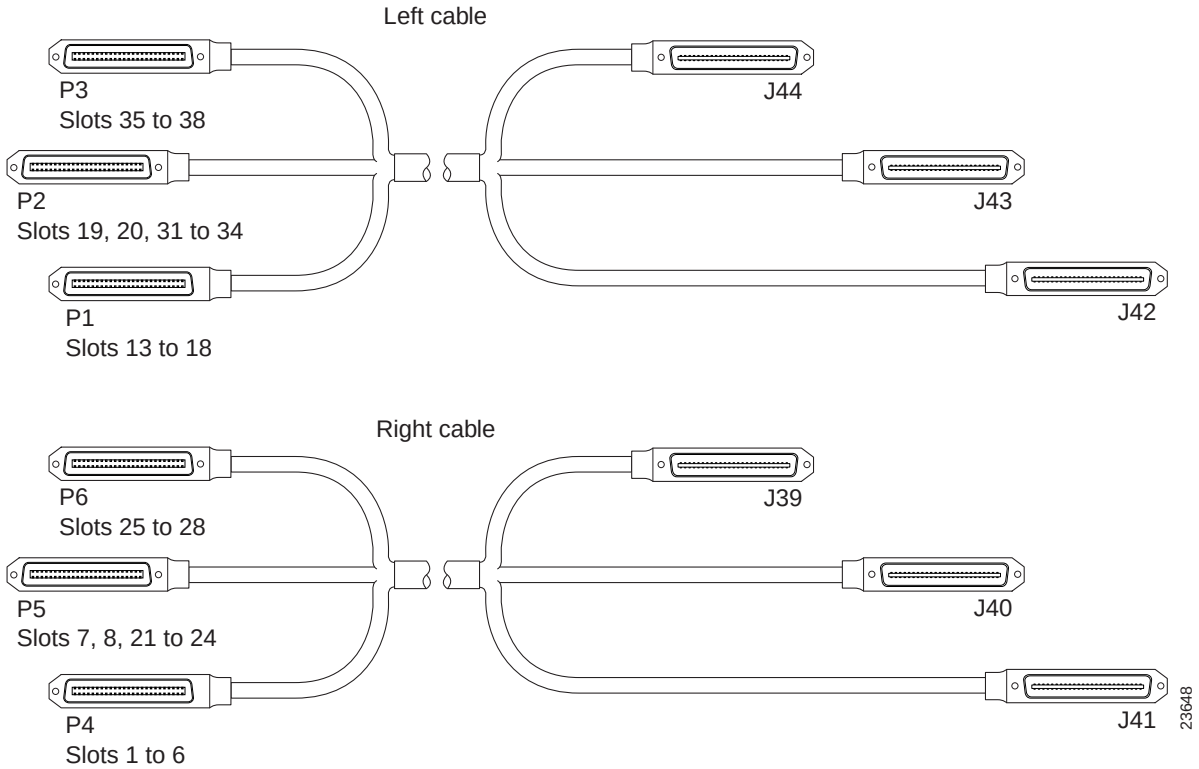
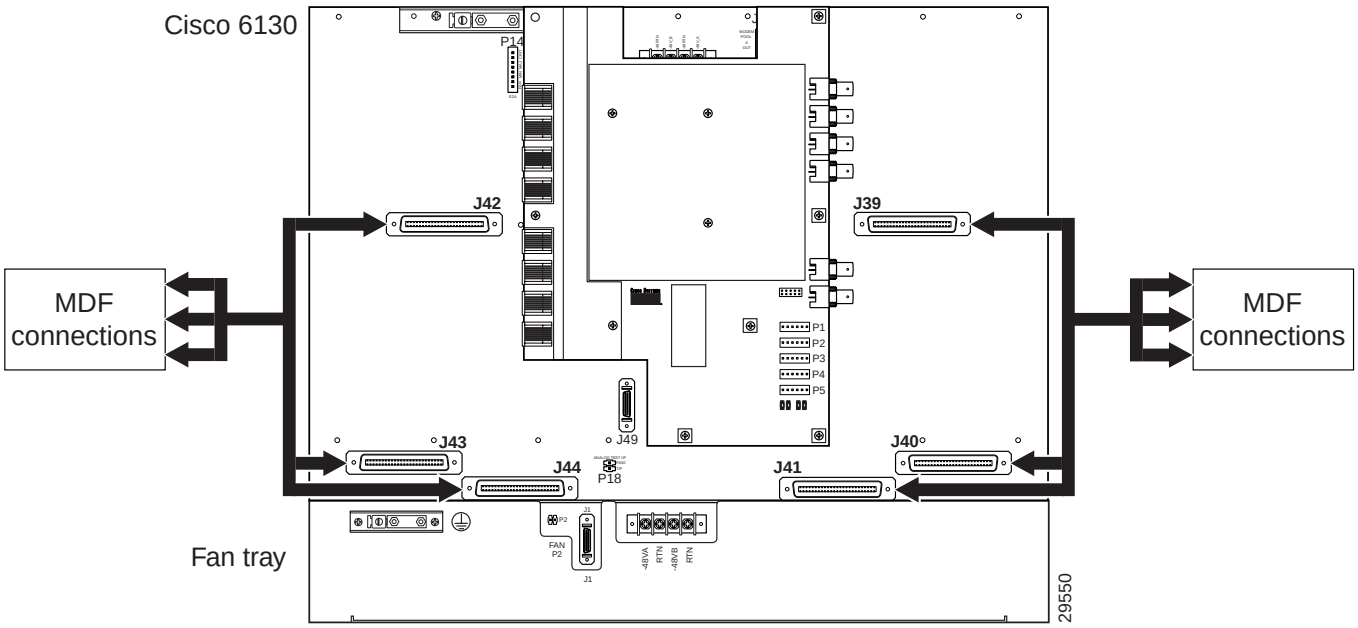


Figure 3-4 shows how to connect the three-to-three cables listed in Table 3-3 from the DSLAM to the MDF.

Figure 3-4 Cisco 6130 DSLAM to MDF Cabling Diagram (3-to-3 Cables)



3.4 Required Cables for Subtended Network Configuration

In subtended network configurations, use only designated cables to connect DS3 system I/O card BNC connectors for subtending.

A single DS3 system I/O card, installed on the Cisco 6130 NI-2 DSLAM backplane, permits up to 12 DS3 configured Cisco 6130 NI-2 DSLAM systems to be subtended. Figure 3-5 shows basic cabling of a typical subtended DS3 configured network.

Note Some system I/O card connectors might not be used because they are specific to a particular configurations of subtended Cisco 6130 NI-2 DSLAMs or are reserved for future use.

Figure 3-5 Basic Cabling for Subtending DS3 Type Cisco 6130 NI-2 DSLAMs